IN THE SPECIFICATION:

Please replace the paragraph beginning at page 11, line 2, and bridging to page 13, line 4, with the following rewritten paragraph:

[0033] FIG. 1 is a circuit diagram of a discharge lamp ballast in accordance with a preferable first embodiment of the invention;

FIG. 2 is an explanatory diagram concerning lamp control changeover of the ballast of FIG. 1;

FIG. 3 is an explanatory diagram concerning lamp control changeover of the ballast of FIG. 1;

FIG. 4 is an explanatory diagram concerning another lamp control changeover of the ballast of FIG. 1;

FIG. 5 is an explanatory diagram concerning another lamp control changeover of the ballast of FIG. 1;

FIG. 6 is an explanatory diagram concerning another lamp control changeover of the ballast of FIG. 1;

FIG. 7 is a circuit diagram of a discharge lamp ballast in accordance with a preferable second embodiment of the invention;

FIG. 8 is an explanatory diagram concerning process of a flicker detection

function in the ballast of FIG. [[8]] 7;

FIG. 9 illustrates an operation example of the flicker detection function of FIG. [[8]] 7;

FIGs. 10(a) and 10(b) are explanatory diagrams concerning process of the flicker detection function of FIG. [[8]] 7;

FIG. 11 illustrates an operation example of the flicker detection function of FIG. [[8]] 7;

FIG. 12 is an explanatory diagram concerning another process of the flicker detection function of FIG. [[8]] 7;

FIGs. 13(a) and 13(b) are explanatory diagrams concerning another control for the ballast of FIG. [[8]] 7;

FIG. 14 is a circuit diagram of a discharge lamp ballast in accordance with a preferable third embodiment of the invention;

FIG. 15 illustrates an operation of a high power control function in the ballast of FIG. 14;

FIG. 16 is an explanatory diagram concerning an operation of a micon in the ballast of FIG. 14;

FIGs. 17(a) - 17(c) are explanatory diagrams concerning process of a non-correction control function in the ballast of FIG. 14;

FIGs. 18(a) - 18(c) are explanatory diagrams concerning process of a correction

control function in the ballast of FIG. 14;

FIGs. 19(a) - 19(c) are explanatory diagrams concerning process of the non-correction control function in the ballast of FIG. 14;

FIG. 20 is a circuit diagram of a discharge lamp ballast in accordance with a preferable fourth embodiment of the invention;

FIG. 21 is an explanatory diagram concerning process of a control changeover function and a high power control function in the ballast of FIG. 20;

FIG. 22 is an explanatory diagram concerning another process of the control changeover function and the high power control function of FIG. 20;

FIG. 23 is an explanatory diagram concerning another process of the control changeover function and the high power control function of FIG. 20;

FIG. 24 illustrates a projector in accordance with a preferable fifth embodiment of the invention;

FIG. 25 is a front view of a construction example of a color filter utilized in the projector of FIG. [[25]] 24; and

FIG. 26 is an explanatory diagram concerning operation of the projector of FIG. [[25]] 24.

Please replace the paragraph beginning at page 13, line 16, with the following rewritten paragraph:

[0035] The power converter 11 comprises a DC-DC converter 111, a ~~low pass filter~~ LC series circuit 112, an inverter 113 with output terminals T11 and T12, and drive circuits 114 and 115, and further comprises a capacitor (smooth condenser) C11 that provides DC power from the DC-DC converter 111 for the lamp DL1.

Please replace the paragraph beginning at page 14, line 15, with the following rewritten paragraph:

[0039] The ~~low pass filter~~ LC series circuit 112 is constructed of a capacitor C12 connected in parallel with the lamp DL1 and an inductor L12 connected in series with the combination of the lamp DL1 and the capacitor C12, and is connected between the output terminals T11 and T12 of the inverter 113.

Please replace the paragraph beginning at page 14, line 19, with the following rewritten paragraph:

[0040] The inverter 113 is constructed of switching elements Q12-Q15, and converts DC voltage from the capacitor C11 into square wave voltage to be applied across the ~~low pass filter~~ LC series circuit 112 and thereby provides AC power for the lamp DL1. Each of the elements Q12-Q15 is a power MOSFET with a diode (body diode). The element Q12 is connected to the positive voltage side, and its drain and source are connected to the positive voltage side (positive terminal) of the

capacitor C11 and the output terminal T11, respectively. The element Q13 is connected to the negative voltage side, and its drain and source are connected to the output terminal T11 and the negative voltage side (negative terminal) of the capacitor C11, respectively. The element Q14 is connected to the positive voltage side, and its drain and source are connected to the positive terminal of the capacitor C11 and the output terminal T12, respectively. The element Q15 is connected to the negative voltage side, and its drain and source are connected to the output terminal T12 and the negative terminal of the capacitor C11, respectively.

Please replace the paragraph beginning at page 15, line 9, with the following rewritten paragraph:

[0041] The drive circuits ~~113 and 114~~ 114 and 115 are constructed of, for example, IR2111 made by IR company each, and alternately turns the switching elements Q12 and Q15 and the switching elements Q13 and Q14 on/off in response to control signals from the control circuit 13.

Please replace the paragraph beginning at page 17, line 11, with the following rewritten paragraph:

[0048] The control changeover function 130a is operable to change control for the lamp DL1 to lamp current control of the lamp current control function 130b at the start of the lamp DL1, and then change the lamp control to constant lamp power control of the constant power control function 130c at stabilization of the lamp DL1. The stabilization of the lamp DL1 is judged based on the detection result from the A/D

converter 13a (the output voltage). Namely, lamp voltage immediately after the start of the lamp DL1 is low voltage, and therefore a start time period is set for a period of time that voltage across the resistor R13 is lower than reference voltage. The reference voltage is previously set based on voltage across the lamp DL1 in its stable operation. Accordingly, when the voltage across the resistor [[13]] R13 reaches or exceeds the reference voltage, the lamp DL1 is judged to reach a stable state.

Please replace the paragraph beginning at page 25, line 20, with the following rewritten paragraph:

[0072] More specifically, as shown in FIGs. 9, 10(a) and 10(b), the flicker detection function reads digital values (values of detection factors) from each of the A/D converters 23a-23c (S11), and finds change value in its digital output per unit time Δt (S12). In case that this change vale is equal to or larger than a prescribed value (reference value), the function detects flicker generation. For example, when digital values corresponding to the lamp voltage change such as V_{DLt1}, V_{DLmin}, ..., V_{DLmax}, V_{DLt2}, etc, the change value is calculated from an absolute value of difference between the maximum value V_{DLmax} and the minimum value V_{DLmin}. The unit time Δt may be the time period TM of FIG. 8. The change value is not limited to that of FIG. [[9(b)]] 10(b), and may be substituted by a value such as an absolute value of difference between two digital values that are continuously picked up at sampling period of the A/D converter, or the like.

Please replace the paragraph beginning at page 29, line 1, with the following rewritten paragraph:

[0082] In another alternate embodiment, in case of the high power control, the high power control function [[230c]] 230d is operable to control the on/off period of the switching element of the DC-DC converter 211 so as to increase the lamp current I_{DL} provided by component of at least a half-period of the square wave voltage while the number of half-period pulses of the square wave voltage reaches a specified number of times. As shown in FIGs. 13(a) and 13(b), by controlling the on/off period of each switching element of the inverter 213, a time period Tn or Tw for increasing the lamp current I_{DL} is set for time that is different from the other time period Tu. In FIG 13(a), the time period Tn is set shorter than the other time period Tu, and in FIG13(b), the time period Tw is set longer than the other time period Tu. Since the increase rate of the lamp current I_{DL} and the time of the half period depend on the ballast, it is possible to supply a desired lamp current I_{DL} to the lamp DL2 by increasing or decreasing the time period Tn or Tw for increasing the lamp current I_{DL}. For example, in case of a HID lamp that is subjected to a harmful influence on the electrodes when the time period Tn equals the other time period Tu, the influence on the electrodes can be reduced by making the time period Tn shorter than the time period Tu. If the time period Tw is made equal to the time period Tu, there are cases in which required energy can not be supplied to the lamp because the lamp current I_{DL} of the lamp has the upper limit value, but it is possible to cope with that by making the time period Tw longer than the time period Tu.

Please replace the paragraph beginning at page 35, line 17, with the following rewritten paragraph:

[0096] In an alternate embodiment, the micon 330 comprises only the correction control function 330E in the high power control function 330d. In this configuration, the control changeover function 330a changes lamp control to the lamp current control till the lamp voltage reaches voltage of the rated lower limit (see table 1 described later) of the rated lamp voltage after the start of the lamp [[DL1]] DL3, and also changes lamp power control to the correction control or the constant lamp power control in case of rated operation and dimming operation. Concretely, the function 330a changes to the correction control of the function 330E when the lamp voltage is voltage within the rated range (see table 1 described later), and also changes to the constant lamp power control of the constant power control function 330c when the lamp voltage is voltage lower than the voltage of the rated lower limit. This control is suitable for projectors. For example, when temperature within a projector rises and lamp voltage drops to voltage lower than the voltage of the rated lower limit, lamp power control is changed from the correction control of the high power control to the constant lamp power control and therefore the temperature within the projector can be lowered.

Please replace the paragraph beginning at page 36, line 16, with the following rewritten paragraph:

[0098] As shown in FIG. 21, the control changeover function 430a is operable to change to first high power control (cf. a period of time TM_{HC11} of FIG. 21) of the high power control function 430d at stabilization of the lamp DL 4, and change lamp power control

to the first high power control or second high power control (cf. a period of time TM_{HC12} of FIG. 21) of the function 430d based on detection result of the state detection circuit [[43]] 42.

Please replace the paragraph beginning at page 39, line 25, with the following rewritten paragraph:

[0108] In an alternate embodiment, as shown in FIG. 22, in case of changeover from the first high power control to the second high power control, the high power control function 430d is operable to change peak (wave height value) of the lamp current through the lamp DL4 so that lamp power under the second high power control is larger than that under the first high power control. In FIG. 22, the peak value of lamp power under the second high power control is set larger than that under the first high power control, and the effective value of lamp power under the second high power control is set to be equal to that under the first high power control. Such changeovers may be at least three sorts of changeovers. For example, third high power control is prepared, its peak value is made larger than that of the second high power control, and the effective value of lamp power under the high power control is made equal to that under the first or the second high power control. And any of the first high power control to the third high power control can be selected based on detection result of the state detection circuit [[43]] 42.

Please replace the paragraph beginning at page 41, line 10, with the following rewritten paragraph:

[0111] The color filter 14 is a disk shape and located in front of the light source, and light that passes through the filter 14 is reflected at the DMD. The filter 14 is divided into regions of red (R), green (G), blue (B) and colorless (W), and rotates at a constant period in direction of the arrow X of FIG. 25. Accordingly, as shown in (a) of Fig. 26, transmission color of the filter [[16]] 14 changes such as red (R), green (G), blue (B) and colorless (W) as time elapses.